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INSTRUMENT RATING

Airman Certification Standards

DRAFT

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FLIGHT STANDARDS SERVICE
Washington, DC 20591

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The U.S. Department of Transportation, Federal Aviation Administration, Airman Testing Standards Branch, AFS-630, P.O. Box 25082, Oklahoma City, OK 73125 developed this ACS with the assistance of the aviation community. The FAA gratefully acknowledges the valuable support from the many individuals and organizations who contributed their time and expertise to assist in this endeavor.

AVAILABILITY

This ACS is available for download from www.faa.gov. Please send comments regarding this document to AFS630comments@faa.gov.

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FOREWORD

The Federal Aviation Administration (FAA) has published the Instrument Rating—Airplane Airman Certification Standards (ACS) document to communicate the aeronautical knowledge, flight proficiency, and risk management standards for the instrument rating in the airplane category, single-engine land and sea; and multiengine land and sea classes.

The FAA views the ACS as the foundation of its transition to a more integrated and systematic approach to airman certification testing and training. The ACS is part of the safety management system (SMS) framework that the FAA uses as a systematic approach to achieving acceptable levels of safety risk. Specifically, the ACS, associated guidance, and test item bank question components of the airman certification system are constructed around the four functional components of an SMS:

- Safety Policy that defines and describes aeronautical knowledge, flight proficiency, and risk management as integrated components of the airman certification system;
- Safety Risk Management processes through which internal and external stakeholders identify and evaluate regulatory changes, safety recommendations, or other factors that require modification of airman testing and training materials;
- Safety Assurance processes to ensure the prompt and appropriate incorporation of changes arising from new regulations and safety recommendations; and
- Safety Promotion in the form of ongoing engagement with both external stakeholders (e.g., the aviation training industry) and FAA policy divisions.

In this connection, the FAA gratefully acknowledges and deeply appreciates the many hours that aviation training experts throughout the industry have contributed to the development of this ACS, along with the associated guidance and a more systematic approach to knowledge test question development. This kind of collaboration, a hallmark of a robust safety culture, strengthens and enhances aviation safety at every level of the airman certification system.

John M. Allen
Director, Flight Standards Service

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INTRODUCTION

Airman Certification Standards Concept

The goal of the airman certification process is to ensure the applicant is ready to safely manage the risks of flight as pilot-in-command, consistent with the privileges of the certificate or rating being exercised. In fulfilling its responsibilities for the airman certification process, the Federal Aviation Administration (FAA) Flight Standards Service (AFS) plans, develops, and maintains materials related to airman certification training and testing.

Historically, these materials have included several components. The FAA knowledge test measures mastery of the aeronautical knowledge areas listed in Title 14 of the Code of Federal Regulations (14 CFR) part 61. The Practical Test Standards (PTS) define the acceptable parameters of flight proficiency in the Areas of Operation listed in 14 CFR part 61. FAA H-series handbooks, test supplements, and other materials provide guidance to applicants, instructors, and evaluators on aeronautical knowledge, flight proficiency, and risk management.

The FAA recognizes that safe operations in today's complex National Airspace System (NAS) require a more systematic integration of aeronautical knowledge, flight proficiency standards, and risk management. The FAA further recognizes the need to more clearly calibrate knowledge, skills, and risk management according to the level of the certificate or rating. To that end, the FAA drew upon the expertise of organizations and individuals across the aviation community to develop the Airman Certification Standards (ACS).

Based on aeronautical knowledge and flight proficiency standards specified in 14 CFR part 61, the ACS integrates the knowledge, skills, and risk management abilities necessary for the safe conduct of each Task. In keeping with this integrated and systematic approach, the knowledge, skills, and risk management sections of each Task stipulate that the applicant must demonstrate understanding of each specific item. The applicant demonstrates this understanding by passing the knowledge exam and practical test.

Throughout this process, the FAA expects evaluators to assess the applicant's mastery of the topic in accordance with the level of learning (i.e., rote, understanding, application, or correlation) most appropriate for the specified Task. For some topics, the evaluator will ask the applicant to describe or explain. For other items, the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge, experience, and information to the circumstances of the given scenario. The flight portion of the practical test requires the applicant to demonstrate flight proficiency, operational skill, and risk management in accordance with the ACS. (Note: As used in this ACS, an evaluator is any person authorized to conduct airman testing (e.g., an FAA aviation safety inspector, designated pilot examiner, or other individual authorized to conduct a practical test.)

Using the ACS

The ACS consists of ***Areas of Operation***, arranged in a logical sequence that begins with Preflight Preparation and ends with Postflight Procedures. Each Area of Operation includes ***Tasks*** appropriate to that Area of Operation. Each Task begins with an ***Objective*** stating what the applicant should know and/or do. The ACS then lists the aeronautical knowledge, skills, and risk management considerations relevant to the specific Task, along with the conditions and acceptable standards for performance. The ACS uses ***Notes*** to emphasize special considerations. The FAA will revise the ACS as circumstances require.

Practical Tests will be based on the ACS in effect the day of the test. The FAA encourages applicants and instructors to use the ACS to measure progress during training, and as a reference to ensure the applicant is adequately prepared for the knowledge and practical tests.

The FAA expects evaluators to adhere to 14 CFR and this ACS. The ACS uses the terms "will" and "must" to convey directive (mandatory) information. The terms "should" and "may" denote items that are recommended, but not required.

The applicant must pass the knowledge test before taking the practical test. Further, the applicant must pass the oral portion of the practical test before beginning the flight portion because the oral portion of the practical test allows the evaluator to determine whether the applicant is sufficiently prepared to advance to the flight portion of the practical test.

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AREAS OF OPERATION

I. Preflight Preparation

Task	A. Pilot Qualifications
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with the requirements to act as pilot-in-command under Instrument Flight Rules.
Knowledge	The applicant demonstrates understanding of: <ol style="list-style-type: none">1. Recent instrument flight experience requirements.2. Requirements when recent instrument rating flight experience has not been met.3. Pilot logbook/record-keeping.4. Physiological factors that might affect the pilot's ability to fly under instrument conditions.5. When an instrument rating is required.
Skills	The applicant demonstrates the ability to: <ol style="list-style-type: none">1. Apply requirements to act as PIC under IFR in a scenario given by the evaluator.
Risk Management	The applicant applies risk management identification, assessment, and mitigation principles to: <ol style="list-style-type: none">1. Maintaining currency versus proficiency.2. Setting personal minimums.3. Flying with unfamiliar flight display systems.

Task	<i>B. Weather Information</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with obtaining, understanding, and applying weather information for a flight under IFR.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Weather products required for preflight planning, enroute operations, and proceeding to the destination or alternate. 2. General elements of weather systems. 3. Types and hazards of icing. 4. Meteorology to include: <ol style="list-style-type: none"> a. Weather system formation, including air masses and fronts b. Cloud types and hazards c. Turbulence d. Thunderstorms e. Wind shear f. Fog g. Frost 5. Enroute weather resources.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Use available aviation weather resources to obtain an adequate weather briefing. 2. Correlate weather information to determine alternate requirements. 3. Correlate available weather information to make a competent go-no go decision. 4. Obtain weather in-flight.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Obtaining aviation weather reports and forecasts. 2. Obtaining inflight aviation weather resources. 3. Identifying alternate airports along the intended route of flight. 4. Anticipating circumstances that would make diversion prudent. 5. Identifying hazardous weather conditions that may affect the planned flight. 6. Flying in known icing conditions.

Task	<i>C. Cross-Country Flight Planning</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with planning and filing an IFR cross-country flight.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Advantages and disadvantages of altitude selection. 2. How to compute fuel reserves. 3. Conditions conducive to icing, windshear, microbursts, and turbulence. 4. Symbology found on IFR enroute charts. 5. Airspace depicted on IFR enroute charts. 6. Where to locate and apply preferred IFR routing. 7. Elements of an IFR flight plan. 8. Procedures for activating and closing an IFR flight plan in controlled and non-controlled airspace.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Recalculate fuel reserves based on a scenario provided by the evaluator. 2. Create and file an IFR flight plan. 3. Interpret Departure, Enroute, Arrival, and Instrument Approach Procedures. 4. Divert to alternate.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Selecting inappropriate IFR altitudes. 2. Managing inadvertent icing encounters. 3. Understanding the limitations of ATC services. 4. Establishing inadequate fuel reserves. 5. Planning a route overflying significant environmental influences, mountains, and large bodies of water. 6. Managing human factors that may impact making an initial, and on-going, go-no decision. 8. Overflying areas unsuitable for landing or below your personal weather minimums. 9. Limitations of protected airspace in mountainous terrain.

II. Preflight Procedures

Task	<i>A. Aircraft Systems Related to IFR Operations</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with Anti-Icing and De-Icings systems.
Knowledge	The applicant demonstrates understanding of: <ol style="list-style-type: none">1. General operational characteristics and limitations of anti-icing and de-icing equipment.
Skills	The applicant demonstrates the ability to: <ol style="list-style-type: none">1. Understand and use the anti-icing and deicing equipment, applicable to their aircraft, in icing conditions.
Risk Management	The applicant applies risk management identification, assessment, and mitigation principles to: <ol style="list-style-type: none">1. Fuselage, wing, tailplane, propeller, carburetor and intake icing.2. Anti and deicing equipment limitations.3. Limitations of systems certified for flight into known icing.

Task	<i>B. Aircraft Flight Instruments and Navigation Equipment</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with managing instruments appropriate for an IFR flight.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. General operation of flight instruments. 2. General characteristics of navigation instruments. 3. General characteristics and common failure modes of autopilot systems. 4. Common failure modes of flight and navigation instruments. 5. Difference between approved and non-approved navigation devices. 6. Limitations of portable devices for guidance or reference.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Operate and manage installed flight control and navigation equipment.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Improper Automation Management. 2. Operating and interpreting unfamiliar flight and navigation instruments. 3. Distractions created by programming advanced avionics. 4. Using an electronic flight bag.

Task	<i>C. Instrument Cockpit Check</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with preflighting the aircraft instruments necessary for an IFR flight.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures for flying with inoperative equipment. 2. Required documentation for flying with inoperative equipment. 3. Limitations of flying with inoperative equipment. 4. Purpose of performing an instrument cockpit check. 5. Requirement for having a current aviation database.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Perform an adequate preflight inspection of installed flight instruments and navigation equipment. 2. Make a determination if the aircraft is legal and/or safe to fly with inoperative equipment. 3. Properly document inoperative equipment.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Flying with inoperative equipment. 2. Programming avionics during taxi. 3. Flying with outdated navigation publications or databases.

III. Air Traffic Control Clearances and Procedures

Task	A. Air Traffic Control Clearances
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant can effectively communicate with ATC in the IFR system.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Responsibilities associated with accepting a clearance. 2. Requirements to read back ATC clearances. 3. PIC emergency authority associated while flying under IFR. 4. Various methods of obtaining a clearance. 5. Terrain clearance requirements associated with departure procedures.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Use and understand standard phraseology. 2. Correctly copy, read back, interpret, and comply with ATC clearances. 3. Correctly set up communication frequencies, navigation systems and transponder codes in compliance with the ATC clearance.
Risk Management	<p>The applicant demonstrates the ability to identify, assess, and mitigate risks associated with:</p> <ol style="list-style-type: none"> 1. Accepting ATC clearances the PIC does not fully understand. 2. ATC issuing an inappropriate clearance. 3. Accepting clearances for which the aircraft lacks the performance and /or navigation capability to comply with the clearance, and explain appropriate actions if unable to comply. 4. Accepting short void times. 5. Obtaining a clearance while airborne. 6. Terrain avoidance on takeoff and managing those risks in a non-radar environment. 7. Accepting another aircraft's clearance.

Task	<i>B. Compliance with Departures, En Route, and Arrival Procedures and Clearances</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with understanding and complying with ATC clearances and procedures.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. How to determine if navigation charts and data bases are current. 2. Requirements to read back clearances. 3. Methods to obtain ATC clearances. 4. Terrain clearance requirements associated with departure procedures. 5. PIC emergency authority, if required, when flying under IFR. 6. Lost communication procedures. 7. Purpose of "expect" in a clearance. 8. Procedures involved for departure, enroute, and arrival procedures. 9. Position reporting.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Understand and use standard phraseology. 2. Correctly copy, read back, interpret, and comply with ATC clearances. 3. Correctly set appropriate flight instruments / avionics to comply with clearance. 4. Determine if navigation data and charts are current. 5. Establish two-way communication with the proper controlling agency, in a timely manner, using standard phraseology. 6. Maintain the applicable airspeed within ± 10 knots; headings within $\pm 10^\circ$; altitude within ± 100 feet; and tracks a course, radial, or bearing within $\frac{3}{4}$-scale deflection of the CDI on a procedure.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Using outdated navigation publications and databases. 2. Accepting a short void time. 3. Accepting incomplete or incorrect clearances. 4. Accepting clearances that may exceed the aircraft performance capability. 6. Terrain avoidance in a non-radar environment.

Task	C. Holding Procedures
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with holding procedures.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Purpose of holding. 2. Reporting criteria associated with holding patterns. 3. Recommended entry procedures. 4. Difference between Minimum and Emergency Fuel. 5. Wind corrections in holding. 6. Using the autopilot (if equipped) for holding.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Update fuel reserve calculations based on EFC times. 2. Maintain the airspeed within ± 10 knots; altitude within ± 100 feet; headings within $\pm 10^\circ$; and track a selected course, radial or bearing within $\frac{3}{4}$-scale deflection of the CDI. 3. Use appropriate navigation displays, as supplementary devices, to maintain prescribed ground track. 4. Use proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to a specified time. 5. Comply with restrictions, if applicable, associated with the holding pattern. 6. Set appropriate power settings for fuel conservation.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Inadequate fuel reserves if assigned unexpected further clearance time. 2. Not declaring Minimum or Emergency fuel. 3. Scenarios which could lead to being assigned holding. 4. Deteriorating weather while holding and/or at the destination.

IV. Flight by Reference to Instruments

Task	A. Basic Instrument Flight Maneuvers
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing basic instrument flight maneuvers.
Knowledge	The applicant demonstrates understanding of: <ol style="list-style-type: none">1. Concepts of instrument flight references.
Skills	The applicant demonstrates the ability to: <ol style="list-style-type: none">1. Maintain altitude within ± 100 feet during level flight, headings within $\pm 10^\circ$, airspeed within ± 10 knots, and bank angles within $\pm 5^\circ$ during turns.2. Use proper instrument crosscheck and interpretation, and apply the appropriate pitch, bank, power, and trim corrections when applicable.
Risk Management	The applicant applies risk management identification, assessment, and mitigation principles to: <ol style="list-style-type: none">1. Situations that can degrade instrument cross-check.2. Being distracted by passengers.3. Physiological factors that can degrade instrument cross-check.

Task	<i>B. Recovery From Unusual Flight Attitudes</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing unusual flight attitudes.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Physiological factors that can lead to, or hinder recovery from, unusual attitudes. 2. Systems and equipment failures that could lead to unusual attitudes. 3. Environmental factors that can lead to unusual attitudes. 4. Recovery process to restore the aircraft to normal flight attitude.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Recognize, confirm, and recover from unusual attitudes (nose-high and nose-low; low or high speed). 2. Apply proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, and power corrections, in the correct sequence, to return the aircraft to a stabilized level flight attitude.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Situations that could lead to loss of control. 2. Encountering unusual attitudes associated with stress, high workload, task saturation, and distractions. 3. Making control inputs without confirming the aircraft attitude. 4. Performing incorrect recovery procedures.

V. Navigation Systems

Task	A. Intercepting and Tracking Navigational Systems
Reference	Pending
Airman Test Report	Pending
Objective	<p>To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with intercepting and tracking navigation aids.</p> <p>NOTE: Reference to specific navigational equipment shall be disregarded if the aircraft is not equipped with those systems.</p>
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures for intercepting and tracking. 2. Course guidance indications. 3. Indications of navigation systems failures.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Tune and correctly identify the navigation facility. 2. Set and correctly orient the course to be intercepted. 3. Intercept the specified course at a predetermined angle, inbound or outbound from a navigational facility. 4. Maintain airspeed within ± 10 knots, altitude within ± 100 feet, and selected headings within $\pm 5^\circ$. 5. Apply proper correction to maintain a course, allowing no more than $\frac{3}{4}$-scale deflection of the CDI or within $\pm 10^\circ$ in case of an RMI. 6. Determine the aircraft position relative to the navigational facility or from a waypoint. 7. Intercept an arc, if applicable for the procedure being flown, and maintain that arc within ± 1 nautical mile. 8. Recognize navigational receiver or facility failure, and when required, report the failure to ATC. 9. Use MFD and other graphical navigation displays, if installed, to monitor position, track wind drift, and other parameters to intercept and maintain the desired flightpath. 10. Properly program the autopilot to intercept courses.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Incorrectly intercepting and tracking courses. 2. Intercepting and tracking courses using secondary display information in advanced avionics aircraft.

VI. Instrument Approach Procedures

Task	A. Nonprecision Approach
Reference	<p>Pending</p> <p>NOTE: The applicant must accomplish at least two nonprecision approaches (one of which must include a procedure turn or, in the case of an RNAV approach, a Terminal Arrival Area procedure). At least one nonprecision approach must be flown without the use of autopilot and without the assistance of radar vectors. (The yaw damper and flight director are not considered parts of the autopilot for purpose of this part). If the equipment allows, at least one nonprecision approach shall be conducted without vertical guidance. The evaluator will select nonprecision approaches that are representative of the type that the applicant is likely to use.</p>
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing nonprecision approach procedures.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures and limitations associated with nonprecision approach procedures. 2. Differences between LP and LNAV approach guidance. 3. Annunciations expected during a GPS approach.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Select and comply with the appropriate instrument approach procedure to be performed. 2. Establish two-way communications with ATC, as appropriate, to the phase of flight or approach segment, and uses proper communication phraseology. 3. Select, tune, identify, and confirm the operational status of navigation equipment to be used for the approach procedure. 4. Comply with all clearances issued by ATC or the evaluator. 5. Recognize if any flight instrumentation is inaccurate or inoperative, and take appropriate action. 6. Advise ATC or the evaluator anytime the aircraft is unable to comply with a clearance. 7. Establish the appropriate aircraft configuration and airspeed considering turbulence and wind shear, and complete the aircraft checklist items appropriate to the phase of the flight. 8. Maintain, prior to beginning the final approach segment, altitude within ± 100 feet, heading within $\pm 10^\circ$ and allows less than $\frac{3}{4}$-scale deflection of the CDI or within $\pm 10^\circ$ in the case of an RMI, and maintain airspeed within ± 10 knots. 9. Apply the necessary adjustments to the published MDA and visibility criteria for the aircraft approach category when required. 10. Establish a stabilized approach profile with a rate of descent and track that will ensure arrival at the MDA prior to reaching the MAP. 11. Maintain, while on the final approach segment, no more than a $\frac{3}{4}$-scale deflection of the CDI or within 10° in case of an RMI, and maintain airspeed within ± 10 knots of that desired. 12. Maintain the MDA, when reached, within $+100$ feet, -0 feet to the MAP. 13. Execute the missed approach procedure when the required visual references for the intended runway are not distinctly visible and identifiable at the MAP. 14. Execute a normal landing from a straight-in or circling approach when instructed by the evaluator. 15. Use MFD and other graphical navigation displays, if installed, to monitor position, track wind drift and other parameters to maintain desired flightpath. 16. Confirm appropriate annunciations during a GPS approach.

Task continued on next page.

Task	<i>A. Nonprecision Approach</i>
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Not following prescribed procedures. 2. Excessive decent rates. 3. Continuing an approach in worsening conditions. 4. Not flying a stabilized approach.

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Task	<i>B. Precision Approach</i>
Reference	Pending
Airman Test Report	Pending
Objective	<p>To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing precision approach procedures.</p> <p>NOTE: A precision approach, utilizing aircraft NAVAID equipment for centerline and vertical guidance, must be accomplished in simulated or actual instrument conditions to Decision Altitude.</p>
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures and limitations associated with precision approach procedures. 2. Annunciations expected during a GPS approach. 3. Decent rates to maintain vertical guidance.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Establish two-way communications with ATC using the proper communications phraseology, as required for the phase of flight or approach segment. 2. Comply, in a timely manner, with all clearances, instructions, and procedures. 3. Advise ATC anytime the applicant is unable to comply with a clearance. 4. Establish the appropriate airplane configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions. 5. Complete the aircraft checklist items appropriate to the phase of flight or approach segment, including engine out approach and landing checklists, if appropriate. 6. Prior to beginning the final approach segment, maintain the desired altitude ± 100 feet, the desired airspeed within ± 10 knots, the desired heading within $\pm 10^\circ$; and accurately tracks radials, courses, and bearings. 7. Select tune, identify, and monitors the operational status of ground and airplane navigation equipment used for the approach. 8. Apply the necessary adjustments to the published DA/DH and visibility criteria for the airplane approach category as required. 9. Establish a predetermined rate of descent at the point where the electronic glideslope begins, which approximates that required for the aircraft to follow the glideslope. 10. Maintain a stabilized final approach, from the Final Approach Fix to DA/DH allowing no more than $\frac{3}{4}$-scale deflection of either the glideslope or localizer indications and maintains the desired airspeed within ± 10 knots. 11. Immediately initiate the missed approach procedures when at the DA/DH, and the required visual references for the runway are not unmistakably visible and identifiable. 12. Transition to a normal landing approach only when the aircraft is in a position from which a descent to a landing on the runway can be made at a normal rate of descent using normal maneuvering. 13. Maintain localizer and glideslope within $\frac{3}{4}$-scale deflection of the indicators during the visual descent from DA/DH to a point over the runway where glideslope must be abandoned to accomplish a normal landing. 14. Use MFD and other graphical navigation displays, if installed, as a supplementary way to monitor position, track wind drift and other parameters to maintain desired flightpath. 15. Confirms annunciations during a GPS approach.

Task continued on next page.

Task	<i>B. Precision Approach</i>
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Not following prescribed procedures. 2. Descending below DA without proper visual references. 3. Improper aircraft configurations during approach and missed approach. 4. Human factors that might impact continuing an approach in worsening conditions. 5. Not flying a stabilized approach.

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Task	<i>C. Missed Approach</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing missed approach procedures.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures and limitations associated with missed approach procedures. 2. Proper MAP procedures associated with GPS/FMS. 3. Proper autopilot management procedures associated with MAP procedures.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Initiate the missed approach promptly by applying power, establishing a climb attitude, and reducing drag in accordance with the aircraft manufacturer's recommendations. 2. Report to ATC beginning the missed approach procedure. 3. Uncouple and re-couples autopilot at appropriate times during the MAP procedure (if installed). 4. Comply with the published or alternate missed approach procedure. 5. Advise ATC or evaluator anytime the aircraft is unable to comply with a clearance, restriction, or climb gradient. 6. Follow the recommended checklist items appropriate to the go-around procedure. 7. Request, if appropriate, ATC clearance to the alternate airport, clearance limit, or as directed by the evaluator. 8. Maintain the recommended airspeed within ± 10 knots; heading, course, or bearing within $\pm 10^\circ$; and altitude(s) within ± 100 feet during the missed approach procedure. 9. Use MFD and other graphical navigation displays, if installed, to monitor position and track to help navigate the missed approach.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Not following prescribed procedures. 2. Options of holding, diverting, or electing to fly the approach again. 3. Executing a missed approach procedure before the missed approach point.

Task	<i>D. Circling Approach</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing circling approach procedures.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures and limitations associated with circling approaches. 2. Approach categories and obstacle clearances.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Select and comply with the appropriate circling approach procedure considering turbulence and wind shear and considering the maneuvering capabilities of the aircraft. 2. Confirm the direction of traffic and adheres to all restrictions and instructions issued by ATC and the evaluator. 3. Maintain the appropriate circling altitude until in a position from which a descent to a normal landing can be made. 4. Maneuver the aircraft, after reaching the authorized MDA and maintains that altitude within +100 feet, -0 feet and a flightpath that permits a normal landing on a runway. The runway selected must be such that it requires at least a 90° change of direction, from the final approach course, to align the aircraft for landing.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Not following prescribed circling approach procedures. 2. Executing a circling approach at night. 3. Losing sight of the runway during a circling approach. 4. Accepting a circling approach in marginal visibility.

Task	<i>E. Landing from an Instrument Approach</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing the procedures for landing from an instrument approach.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Procedures and limitations of landing from an instrument approach. 2. Purpose of a stabilized approach. 3. Regulatory requirements for landing from an instrument approach. 4. Approach lighting systems.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Transition at the DA, MDA, or VDP to a visual flight condition, allowing for safe visual maneuvering and a normal landing. 2. Adhere to all ATC (or evaluator) advisories, such as NOTAMs, wind shear, wake turbulence, runway surface, braking conditions, and other operational considerations. 3. Complete appropriate checklist items for the prelanding and landing phase. 4. Maintain positive aircraft control throughout the complete landing maneuver.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Landing from an unstabilized instrument approach. 2. Flying below glidepath. 3. Runway incursion after landing from an approach. 4. Transitioning to visual references for landing.

VII. Emergency Operations

Task	A. Loss of Communications
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated performing the procedures associated with loss of communication.
Knowledge	The applicant demonstrates understanding of: <ol style="list-style-type: none">1. Procedures for lost communication at various phases of flight.2. Criteria for beginning an approach procedure at the destination.3. When to deviate from the IFR clearance.4. Techniques for re-establishing communications.
Skills	The applicant demonstrates the ability to: <ol style="list-style-type: none">1. Recognize loss of communication.2. Accomplish action to re-establish communications.3. Continue to destination.4. Begin an approach at the appropriate time.
Risk Management	The applicant applies risk management identification, assessment, and mitigation principles to: <ol style="list-style-type: none">1. Remaining VFR in marginal weather conditions.2. Not following prescribed loss of communication procedures.

Task	<i>B. One Engine Inoperative—Instrument Approach (Multiengine Airplane)</i>
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated the procedures for recovering the aircraft with an inoperative engine.
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. The procedures and/or differences used during an instrument approach in a multiengine aircraft with one engine inoperative versus all engines operating.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Recognize engine failures, as simulated by the evaluator, during straight-and-level flight and turns. 2. Set all engine controls, reduce drag, and identify and verify the inoperative engine. 3. Establish the best engine-inoperative airspeed, or airspeed appropriate for the phase of flight, and trim the aircraft. 4. Accomplish prescribed checklist procedures for trouble-shooting and/or securing the inoperative engine. 5. Establish and maintain the recommended flight attitude and configuration for the best performance for all maneuvering necessary for the instrument approach procedures. 6. Attempt to determine the reason for the engine failure. 7. Monitor all engine control functions and make necessary adjustments. 8. Request and receive an actual or a simulated ATC clearance for an instrument approach. 9. Follow the actual or a simulated ATC clearance for an instrument approach. 10. Establish a rate of descent that will ensure arrival at the MDA/DA prior to reaching the MAP with the aircraft continuously in a position from which descent to a landing on the intended runway can be made straight in or circling. 11. Maintain, where applicable, the specified altitude within ± 100 feet, the airspeed within ± 10 knots if within the aircraft's capability, and the heading within $\pm 10^\circ$. 12. Set the navigation and communication equipment used during the approach and uses the proper communications technique. 13. Avoid loss of aircraft control, or attempted flight contrary to the engine-inoperative operating limitations of the aircraft. 14. Use MFD and other graphical navigation displays, if installed, to monitor position and enhance situational awareness. 15. Comply with the published criteria for the aircraft approach category when circling. 16. Allow, while on final approach segment, no more than $\frac{3}{4}$-scale deflection of either the localizer or glideslope or GPS indications, or within $\pm 10^\circ$ or $\frac{3}{4}$-scale deflection of the nonprecision final approach course. 17. Complete a safe landing.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Not maintaining adequate airspeed. 2. The increased probability of loss of aircraft control. 3. Flying an approach with one engine inoperative. 4. Executing a missed approach with an inoperative engine. 5. Not using vertical guidance during the approach.

Task	<i>C. Approach with Loss of Primary Flight Instrument Indicators</i>
Reference	Pending
Airman Test Report	Pending
Objective	<p>To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with performing an approach with the loss of primary flight control instruments.</p> <p>Note: This task should evaluate the most realistic failure mode(s) of the aircraft equipment used for the test.</p>
Knowledge	<p>The applicant demonstrates understanding of:</p> <ol style="list-style-type: none"> 1. Likely failure modes of the vacuum and electric attitude instruments. 2. Recognizing and confirming likely malfunctions, and how to correct or minimize the effect of their loss.
Skills	<p>The applicant demonstrates the ability to:</p> <ol style="list-style-type: none"> 1. Advise ATC or evaluator anytime the aircraft is unable to comply with a clearance. 2. A nonprecision instrument approach without the use of the primary flight instrument using the objectives of the nonprecision approach.
Risk Management	<p>The applicant applies risk management identification, assessment, and mitigation principles to:</p> <ol style="list-style-type: none"> 1. Using secondary flight displays. 2. Not using moving map guidance to increase situational awareness.

VIII. Postflight Procedures

Task	A. Checking Instruments and Equipment
Reference	Pending
Airman Test Report	Pending
Objective	To determine the applicant exhibits satisfactory knowledge, skills, and risk management associated with checking flight instruments after flight.
Knowledge	The applicant demonstrates understanding of: <ol style="list-style-type: none">1. The requirements for documenting equipment malfunctions.
Skills	The applicant demonstrates the ability to: <ol style="list-style-type: none">1. Note all flight equipment for proper operation.2. Note all equipment and/or aircraft malfunctions and makes appropriate documentation of improper operation or failure of such equipment.
Risk Management	The applicant applies risk management identification, assessment, and mitigation principles to: <ol style="list-style-type: none">1. Not performing a proper post-flight inspection.2. Not properly documenting aircraft discrepancies.

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APPENDIX 1: THE KNOWLEDGE TEST

The knowledge test is an important part of the airman certification process. Applicants must pass the knowledge test before taking the practical test.

Knowledge Test Description

The knowledge test consists of objective, multiple-choice questions. There is a single best response for each test question. Each test question is independent of other questions. A correct response to one does not depend upon, or influence, the correct response to another.

Test Code	Test Name	Number of Questions	Allotted Time	Passing Score
IRA	Instrument Rating— Airplane	60	2.5	70
IRH	Instrument Rating— Helicopter	60	2.5	70
IFP	Instrument Rating— Foreign Pilot	50	3.5	70

Knowledge Test Eligibility Requirements

For information concerning eligibility for Instrument Rating certification, please refer to:

- Knowledge Test: Prerequisites and Passing Grades: 14 CFR 61.35
- Eligibility: 14 CFR 61.65

Knowledge Test Centers

The FAA authorizes hundreds of knowledge testing center locations. For information on authorized testing centers and to register for the knowledge test, contact one of the providers listed at www.faa.gov.

Test Authorization

In order to take the Instrument Rating knowledge test, you must provide one of the following:

- Graduation certificate issued by an FAA certificated pilot school (14 CFR 61.71), or a
- Written statement or logbook endorsement from an authorized instructor certifying that the applicant completed an applicable ground training or home study course and is prepared for the knowledge test (14 CFR 61.55).

Acceptable forms of retest authorization for Instrument Rating tests:

- The original failed, passed, or expired Airman Knowledge Test Report, provided the applicant still has the test report in his or her possession.

Note: If the applicant no longer possesses the original test report, he or she may present an 'expired test/credit' letter issued by AFS-760.

- An applicant retesting after failure is required to submit the applicable test report indicating failure, along with an endorsement from an authorized instructor who gave the applicant the required additional training. The endorsement must certify the applicant is competent to pass the test. The test proctor must retain the original failed test report presented as authorization and attach it to the applicable sign-in/out log.

Knowledge Test Procedures

Before starting the actual test, the testing center will provide an opportunity to practice navigating through the test. This practice or tutorial session may include sample questions to familiarize the applicant with the look and feel of the software. (e.g., selecting an answer, marking a question for later review, monitoring time remaining for the test, and other features of the testing software).

The applicant may use the following aids, reference materials, and test materials, as long as the material does not include actual test questions or answers:

Acceptable Materials	Unacceptable Materials	Notes
<i>Supplement book provided by proctor</i>	Written materials that are handwritten, printed, or electronic	Testing centers may provide calculators and/or deny the use of personal calculators
<i>All models of aviation-oriented calculators or small electronic calculators that perform only arithmetic functions</i>	Electronic calculators incorporating permanent or continuous type memory circuits without erasure capability	Unit Member (proctor) may prohibit the use of your calculator if he or she is unable to determine the calculator's erasure capability
<i>Calculators with simple programmable memories, which allow addition to, subtraction from, or retrieval of one number from the memory; or simple functions, such as square root and percentages</i>	Magnetic cards, magnetic tapes, modules, computer chips, or any other device upon which pre-written programs or information related to the test can be stored and retrieved	Printouts of data must be surrendered at the completion of the test if the calculator incorporates this design feature.
<i>Scales, straightedges, protractors, plotters, navigation computers, blank log sheets, holding pattern entry aids, and electronic or mechanical calculators that are directly related to the test</i>	Dictionaries	Before, and upon completion of the test, while in the presence of the Unit Member, actuate the ON/OFF switch or RESET button, and perform any other function that ensures erasure of any data stored in memory circuits
<i>Manufacturer's permanently inscribed instructions on the front and back of such aids, e.g., formulas, conversions, regulations, signals, weather data, holding pattern diagrams, frequencies, weight and balance formulas, and air traffic control procedures</i>	Any booklet or manual containing instructions related to use of test aids	Unit Member makes the final determination regarding aids, reference materials, and test materials

Testing Procedures for Applicants Requesting Special Accommodations

An applicant with a learning or reading disability may request approval from AFS-630 through the local FSDO or IFO to take an airman knowledge test using one of the three options listed below, in preferential order:

Option 1: Use current testing facilities and procedures whenever possible.

Option 2: Use a self-contained, electronic device which pronounces and displays typed-in words (e.g., the Franklin Speaking Wordmaster®) to facilitate the testing process.

(NOTE: The device should consist of an electronic thesaurus that audibly pronounces typed-in words and presents them on a display screen. The device should also have a built-in headphone jack in order to avoid disturbing others during testing.)

Option 3: Request the proctor's assistance in reading specific words or terms from the test questions and/or supplement book. To prevent compromising the testing process, the proctor must be an individual with no aviation background or expertise. The proctor may provide reading assistance only (i.e., no explanation of words or terms). When an applicant requests this option, the FSDO or IFO inspector must contact the Airman Testing Standards Branch (AFS-630) for assistance in selecting the test site and assisting the proctor. Before approving any option, the FSDO or IFO inspector must advise the applicant of the regulatory certification requirement to be able to read, write, speak, and understand the English language.

Cheating or Other Unauthorized Conduct

Computer testing centers must follow strict security procedures to avoid test compromise in accordance with FAA Order 8080.6 (as amended), Conduct of Airman Knowledge Tests. Testing centers will terminate a test any time the test proctor suspects an occurrence of cheating.

The FAA will conduct an investigation of the incident. If the investigation determines that cheating or unauthorized conduct occurred, any airman certificate or rating the applicant holds may be revoked. In addition, the applicant may be prohibited from applying for or taking any test for a certificate or rating under 14 CFR part 61 for a period of one year.

Airman Knowledge Test Report

Immediately upon completion of the knowledge test, the applicant receives a printed Airman Knowledge Test Report documenting the score with the testing center's raised, embossed seal. The applicant must retain the original Airman Knowledge Test Report and present it to the evaluator conducting the practical test.

An Airman Knowledge Test Report expires 24-calendar months from the month the applicant completes the knowledge test. If the Airman Knowledge Test Report expires before completion of the practical test, the applicant must retake the knowledge test.

To obtain a duplicate Airman Knowledge Test Report due to loss or destruction of the original, the applicant can send a signed request accompanied by a check or money order for \$1.00, payable to the FAA to:

Federal Aviation Administration
Airmen Certification Branch, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125

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APPENDIX 2: THE PRACTICAL TEST

The evaluator must conduct the practical test in accordance with this ACS. The evaluator must assess the applicant on all tasks included in each Area of Operation of the ACS unless otherwise noted.

Note: The applicant must pass the knowledge test before taking the practical test, and the applicant must pass the oral portion of the practical test before beginning the flight portion.

Conduct of the Practical Test

The evaluator must develop a written Plan of Action to conduct the test, which includes all required Areas of Operation and Tasks. The Plan of Action will include a scenario that evaluates as many of the required Areas of Operation and Tasks as possible. As the scenario unfolds during the test, the examiner will interject problems and emergencies the applicant must manage.

The evaluator has the discretion and flexibility to change the Plan of Action in order to accommodate unexpected situations as they arise. The evaluator will evaluate any selected Task in its entirety. The evaluator may elect to suspend and then resume the scenario in order to assess certain tasks.

If performing aspects of a given maneuver, such as emergency procedures, would jeopardize safety, the evaluator will ask the applicant to simulate that portion of the maneuver.

Use of Checklists

The evaluator will assess the applicant's use of an approved manufacturer's checklist or equivalent during the practical test.

Note: If there is no published manufacturer's checklist, the applicant may use the appropriate FAA handbook or equivalent checklist.

Assessing proper checklist use depends upon the specific Task. In all cases, the evaluator should determine the applicant appropriately divides attention and uses proper visual scanning. In some situations, reading the actual checklist may be impractical or unsafe. In such cases, the evaluator should assess the applicant's performance of published or recommended immediate action "memory" items along with his or her review of the appropriate checklist once conditions permit.

Use of Distractions

Research and accident analysis indicate that pilot distraction during critical phases of flight is a factor in many accidents. The evaluator will cause realistic distractions during the flight portion of the practical test in order to evaluate the applicant's ability to use and maintain proper control technique while dividing attention both inside and/or outside the cockpit.

Positive Exchange of Flight Controls

There must always be a clear understanding of who has control of the aircraft. Prior to flight, the pilots involved should conduct a briefing that includes reviewing the procedures for exchanging flight controls.

The FAA recommends a positive three-step process for exchanging flight controls between pilots:

- When one pilot seeks to have the other pilot take control of the aircraft, he or she will say, "You have the flight controls."
- The second pilot acknowledges immediately by saying, "I have the flight controls."
- The first pilot again says, "You have the flight controls."

Pilots should follow this procedure during any exchange of flight controls, including any occurrence during the practical test. The FAA also recommends that both pilots use a visual check to verify that the exchange has occurred. There must never be any doubt as to who is flying the aircraft.

Stall and Spin Awareness

During flight training and testing, the applicant and the instructor or evaluator must always maintain situational awareness with respect to operations that could lead to an inadvertent stall or spin.

Possible Outcomes of the Practical Test

There are three possible outcomes of the practical test: (1) pass, (2) fail, or (3) discontinuance.

Pass

Satisfactory performance requires the applicant to:

- Perform the Tasks specified in the Areas of Operation for the certificate or rating sought within the approved standards;
- Demonstrate mastery of the aircraft by performing each Task successfully;
- Demonstrate proficiency and competency in accordance with the approved standards;
- Demonstrate sound judgment and exercise aeronautical decision-making/risk management;
- Demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

Satisfactory performance will result in the issuance of a temporary certificate.

Note: The tolerances listed in the ACS represent the performance expected in good flying conditions.

Fail

If, in the judgment of the evaluator, the applicant does not meet the standards for any Task, the applicant fails the Task and associated Area of Operation, the test is unsatisfactory, and the examiner issues a Notice of Disapproval. When the examiner issues a Notice of Disapproval, he or she shall list the Area of Operation in which the applicant did not meet the standard. The Notice of Disapproval must also list the Area(s) of Operation not tested, and the number of practical test failures.

The examiner or the applicant may end the test if the applicant fails a Task. The examiner may continue the test only with the consent of the applicant and examiner, and the applicant is entitled to credit for only those Areas of Operation and the associated Tasks performed satisfactorily. Though not required, the examiner has discretion to reevaluate any Task, including those previously passed, during the retest.

Typical areas of unsatisfactory performance and grounds for disqualification include:

- Any action or lack of action by the applicant that requires corrective intervention by the examiner to maintain safe flight.
- Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
- Consistently exceeding tolerances stated in the Objectives.
- Failure to take prompt corrective action when tolerances are exceeded.
- Failure to exercise Risk Management

Discontinuance

When it is necessary to discontinue a practical test for reasons other than unsatisfactory performance (e.g., equipment failure, weather, illness), the evaluator returns all the test paperwork to the applicant. The evaluator must prepare, sign, and issue a Letter of Discontinuance that lists those Areas of Operation the applicant successfully completed and the time remaining to complete the test. The evaluator should advise the applicant to present the Letter of Discontinuance to the evaluator when the practical test resumes in order to receive credit for the items successfully completed. The Letter of Discontinuance becomes part of the applicant's certification file.

Prerequisites for the Test

According to 14 CFR 61.65, an applicant for the Instrument Rating Practical Test must:

- Be at least 17 years of age;
- Hold at least a private pilot certificate, or be concurrently testing for a private pilot certificate, appropriate to the category of aircraft instrument rating sought.
- Be able to read, speak, write, and understand the English language as detailed in AC 60-28;
- Have passed the appropriate knowledge test since the beginning of the 24th month before the month in which he or she takes the practical test;
- Have satisfactorily accomplished the required training and obtained the prescribed aeronautical experience;
- Possess at least a current third class medical certification or, when a military pilot of the U.S. Armed Forces, show and present evidence of an up-to-date medical examination by the U.S. Armed Forces authorizing pilot status;
- Have an endorsement from an authorized instructor certifying the applicant has received and logged three hours of training time within two (2) calendar months preceding the month of application in preparation for the practical test, and is prepared for the practical test;
- Receive and log ground training from an authorized instructor or complete a home-study course on the aeronautical knowledge areas of 14 CFR part 61.65 that apply to the rating sought; and
- Have an endorsement certifying that the applicant has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient, if any, on the airman knowledge test.

Aircraft and Equipment Required for the Practical Test

An applicant is required by 14 CFR 61.45 to provide an airworthy, certificated aircraft for use during the practical test. In addition, the aircraft must have a current navigational database.

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APPENDIX 3: INSTRUMENT PROFICIENCY CHECK

Instructors and evaluators conducting an Instrument proficiency check must ensure the pilot meets the standards established in the ACS for the following Areas of Operation and Tasks:

Guidance on how to conduct an Instrument Proficiency Check can be found at: <http://www.faa.gov>

Area of Operation	Task(s)
Preflight Procedures	Instrument Cockpit check
Air Traffic Control Clearances	Compliance with Departure, En Route and Arrival Procedures and Clearances Holding
Flight By Reference to Instruments	Recovery From Unusual Flight Attitudes
Navigation Systems	Intercepting and Tracking Navigation Systems and DME ARCS
Instrument Approach Procedures	Non Precision Approach Precision Approach Missed Approach Landing From an Approach

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APPENDIX 4: INSTRUCTOR AND EVALUATOR ROLES AND RESPONSIBILITIES

Role of Instructor

Instructors are responsible for training the applicant to the acceptable standards in all subject matter areas, procedures, and maneuvers included in all the Tasks, even if the applicant is simply adding a category to his or her instrument rating.

Role of Evaluator

The evaluator who conducts the practical test is responsible for determining the applicant meets the acceptable standards of aeronautical knowledge, skills, and risk management for each Task in the appropriate ACS.

The FAA does not expect the evaluator to test every Knowledge and Risk Management element on the Practical Test, as the Knowledge Test assessed the applicant's mastery of these areas. The evaluator must, however, test at least one item in each of the Knowledge and Risk Management elements for every Task, emphasizing the topics (if any) the applicant missed on the Knowledge Test. The evaluator must test each item in the Skills elements unless otherwise noted in the Task.

Applicants must complete the oral portion of the practical test before the flight portion; however, oral questioning will continue throughout the flight. To the greatest extent practicable, evaluators shall test the applicant's ability to apply and correlate information, and only use rote questions when appropriate for the material being tested.

If the evaluator determines that a Task is incomplete, or the outcome is uncertain, the evaluator may require the applicant to repeat that Task, or portions of that Task. The FAA made this provision in the interest of fairness, but it does not mean that instruction, practice, or the repetition of an unsatisfactory task is permitted during the practical test.

The evaluator will assess the applicant's use of visual scanning and collision avoidance procedures throughout the entire test.

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APPENDIX 5: USE OF A FLIGHT SIMULATION TRAINING DEVICE (FSTD)

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APPENDIX 6: PRACTICAL TEST CHECKLIST

Applicant's Practical Test Checklist

Appointment with Evaluator

Evaluator's Name: _____

Location: _____

Date/Time: _____

ACCEPTABLE AIRCRAFT

- ☐ Aircraft Documents:
 - ☐ Airworthiness Certificate
 - ☐ Registration Certificate
 - ☐ Operating Limitations
- ☐ Aircraft Maintenance Records:
 - ☐ Logbook Record of Airworthiness Inspections and AD Compliance
- ☐ Pilot's Operating Handbook, FAA-Approved Aircraft Flight Manual

PERSONAL EQUIPMENT

- ☐ View-Limiting Device
- ☐ Current Aeronautical Charts (Printed or Electronic)
- ☐ Computer and Plotter
- ☐ Flight Plan Form
- ☐ Flight Logs
- ☐ Current AIM, Airport Facility Directory, and Appropriate Publications

PERSONAL RECORDS

- ☐ Identification—Photo/Signature ID
- ☐ Pilot Certificate
- ☐ Current Medical Certificate
- ☐ Completed FAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature
- ☐ Original Knowledge Test Report
- ☐ Pilot Logbook with appropriate Instructor Endorsements
- ☐ FAA Form 8060-5, Notice of Disapproval (if applicable)
- ☐ Letter of Discontinuance (if applicable)
- ☐ Approved School Graduation Certificate (if applicable)
- ☐ Evaluator's Fee (if applicable)

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APPENDIX 7: REFERENCES

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APPENDIX 8: ABBREVIATIONS AND ACRONYMS

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